ABSTRACT

Associations with family history of cancer in a population survey

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Few population-based studies have investigated associations between personal and family history of cancer. Using the 2001 California Health Interview Survey data, we describe associations between cancer family histories and breast, prostate and colorectal cancer. Of the 55,513 respondents, 34.4% reported a cancer family history. Personal history of any cancer was reported by 8%; 0.5% had colorectal, 2.4% of females had breast, and 1.5% of males had prostate cancer. Odds ratios were calculated by comparing cancer family histories for respondents with and without breast, prostate and colorectal cancer, adjusting for demographic factors. Family history of breast cancer, and family history of ovarian cancer were associated with breast cancer (OR=2.0, 1.6-2.5 and OR=1.8, 1.1-3.1, respectively). Associations with breast cancer were higher when family histories included breast and ovarian (OR=4.7, 2.1-10.4), breast and melanoma (OR=2.3, 1.1-5.0) or breast and prostate cancer (OR=2.6, 1.5-4.4). Family history of prostate cancer was associated with prostate cancer (OR=3.2, 2.1-4.8). Stronger associations with prostate cancer were observed when family histories included ovarian and melanoma (OR=25.4, 4.1-158), breast and melanoma (OR=14.8, 4.0-55), breast and ovarian (OR=9.7, 2.4-39) or prostate and colorectal cancer (OR=4.5, 1.3-15.6). Family history of colorectal cancer was associated with colorectal cancer (OR=2.3, 1.5-3.4), and associations were also found given family histories of ovarian and cervix (OR=14.9, 7.2-31.2) or colorectal and breast cancer (OR=2.5, 1.1-5.4). Our results show similar associations to those found in case-control studies with a 2 to 3-fold increase in breast, prostate and colorectal cancer given a family history. This suggests population-based, self-reported data are useful in assessing familial risk. Certain combinations of cancer family histories display associations of similar or greater magnitude. Recognizing these familial patterns may have implications for risk assessment.